ASK THE DOCTOR
Answers to Your Health Questions

Whole Heart Nutrition

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Nutrients Every Heart Needs

High blood pressure. High cholesterol levels. Ever increasing stress. All are factors related to the development of heart disease - the leading cause of death for both men and women.[1,2] In fact, 1 in 2 women in the United States dies of heart disease or stroke, while 1 in 30 dies of breast cancer. If current trends remain unchanged, not only will heart disease remain the primary killer in our country, the number of people it claims will steadily and dramatically increase in the next 20 years.[3]

Fortunately, heart disease is a problem you can do something about. Proven ways to prevent or mitigate the effects of heart disease include taking targeted nutritional supplements, making changes in the foods we eat, exercising most days of the week, drinking in moderation, eliminating tobacco use and adapting a positive attitude. Research shows that those of us who are often angry and depressed have more heart disease than people that live their lives with a more positive outlook.[3]

In this *Ask the Doctor*, we'll talk about specific nutritional supplements that are heart healthy, whether your goal is to prevent heart disease or reduce the effects of heart disease if you currently have it.

Q. I am trying hard to live a healthier life. But it all seems so overwhelming. How do I start?

A. It may help to know that you're not alone in feeling overwhelmed. Lots of people feel this way. This is why the Centers for Disease Control and the American Heart Association are both urging people to prevent heart disease by identifying their individual health risk factors.[3,4]

A risk factor is an indicator of whether or not you may develop a certain health condition. In heart disease prevention, there are two kinds of risk factors. There are risk factors you can control – such as diet, exercise, and the supplements you take. There are also risk factors you can't change or control –your age, race, and gender, as well as your family's history of heart disease.[3]

Examples can be really helpful. Let's follow three adults - Fred, Jane, and Earl - and determine their risk factors.

Low Risk
Fred is 32, single, has a job he loves, has an optimistic attitude about his life, and works out 5 days a week. Most days Fred's diet is fruits, vegetables, whole grains and low fat. Occasionally Fred will eat a cheeseburger and fries when he watches the game with his buddies. Fred's risk factors are his male gender and the occasional high fat content in his diet.

Moderate Risk
Jane is 55, a lawyer, married, and has a very stressful job. Jane eats lots of salads, fruits, and whole grains. However, her job requires her to work long hours which leaves little time to exercise. Jane is for the most part happy with her life, but her work stress had led to times of negativity. Her father had a heart attack when he was 56. Jane's risk factors include her age (greater than 50), negativity from job stress, lack of regular exercise, and a family history of heart disease.

High Risk
Earl is 65, married, and has just retired from a job he hated. He spends most of his day watching TV and eating potato chips and other high fat, salty snacks. Earl has told his friends and family since he worked so hard for so long, he is sure to drop dead soon after retiring. He has high cholesterol and high blood pressure. Earl's father had a heart attack and died when he was 73. Earl's risk is his male gender, age (greater than 50), sedentary lifestyle, poor diet, negative outlook on life, high cholesterol and high blood pressure, and a family history of heart disease.

cont. next page

Q. OK, it's pretty easy to see that Fred needs to watch his diet, Jane needs to exercise more, and Earl needs lots of help. But, which supplements should they take?
A. The Whole Heart Nutrition chart (below) is an easy way to determine the supplements each risk level needs. As you can see, everyone wanting to prevent heart disease- Fred, Jane, Earl, you, and I - need to take a quality heart formula multivitamin, garlic, and a fish oil supplement providing Omega-3 fatty acids. CoQ10 is also a smart choice for complete heart health support.

Q. Why do we all need to take a "heart multivitamin"? Why can't we take a regular multivitamin to prevent heart disease?
A. Since the human heart simply cannot function without adequate amounts of certain vitamins and minerals, it seems logical that a multivitamin would be the foundation of good nutrition for your heart. Heart-health formulated multivitamins provide the exact nutrients needed to prevent heart disease. [11,12]

That's why we need to take a specially formulated heart-focused multivitamin. The cells and the tissues that make up the heart must have vitamins C, A, and E, as well as B1, B6 and B12 to function.[13-17] Folic acid, the little B vitamin that is so crucial in preventing spina bifida (a birth defect), breast cancer, and Alzheimer's disease is also needed to keep heart muscles strong.[18] The B vitamins and folic acid are very important to heart health because they help lower homocysteine levels. Homocysteine is a potential and emerging cardiac risk factor. [16-19]

Magnesium is a mighty mineral and healthy hearts need it every day. [20] Alpha lipoic acid, a fatty acid, provides protection against high cholesterol and high blood pressure. [21] Lutein and lycopene are all-natural nutrients and keep our arteries free from the buildup of plaque, a condition linked to heart attacks and strokes. [22,23]

Multivitamins formulated with these exact vitamins, minerals, and nutrients will ***work with*** medications often prescribed to treat heart disease and provide the nutrition our hearts need.

Q. Don't all multivitamins work with medications prescribed to treat heart disease?
A. Many multivitamin formulas contain herbs and other nutrients that can interfere with prescription medications, especially medications prescribed to treat heart disease. One multivitamin does not fit all.

The more risk factors you have, the greater your chance of developing heart disease.	
Factors you CAN'T change	
Increasing age	About four out of five people who die of coronary heart disease are 65 or older. [3,4]
Male gender	Men have more heart attacks than women. Even after menopause, when women's death rate from heart disease increases, men continue to have more heart attacks until both groups reach their 80s. [3,4]
Heredity (including Race)	While heart disease has often been noted to occur in families, recent research has shown this link may be the result of environment more than heredity. In other words, your dad's high blood pressure and your high blood pressure may be related more to your mutual love of salty foods than your genetics.[5,6] African Americans tend to have very high blood pressure and a higher risk of heart attacks than other races. [3,4]
Factors you CAN change	
Tobacco smoke	Smokers have twice the risk of heart attack than nonsmokers.[4]
High blood cholesterol	As blood cholesterol rises, so does the risk of heart disease. [3,4]
High blood pressure	High blood pressure increases the heart's workload, causing the heart to thicken and become stiffer. [4]
Physical inactivity	Exercise most days of the week helps prevent heart disease. The more vigorous the activity, the greater your benefits. [3,4]
Obesity and overweight	People who have excess body fat are more likely to develop heart disease and stroke even if they have no other risk factors. [3,4]
Individual coping styles	Research has shown there is a link between heart disease risk and stress, happiness, negativity, and socioeconomic status. [3,6-10]
Alcohol consumption	Drinking too much alcohol can raise blood pressure. However, the risk of heart disease in people who drink moderate amounts of alcohol (an average of one drink for women or two drinks for men per day) is lower than in nondrinkers. [3,4]

Q. What can garlic supplements do for Fred, Jane and Earl or other people with low to high risk factors?
A. Garlic supplements have a very long and very successful history of preventing premature death from heart attacks. Lately, however, there have been some conflicting news stories about supplemental garlic's ability to lower high cholesterol and high blood pressure – the causes of heart disease and death. That's because many different garlic supplements have been used in these studies - garlic oil, garlic powder, aged garlic extract, and supplements made from fresh garlic. They have all been studied clinically for their effects in heart disease.[24]

The best garlic supplements (and the ones that showed the best effects in garlic studies) contain ***alliin***, which is then converted to ***allicin***. Allicin is the compound that lowers harmfully high cholesterol levels and dangerous blood pressure readings. Allicin is also responsible for garlic's characteristic odor. Because alliin is very stable when dry, properly prepared and enteric coated fresh garlic preparations preserve the allicin-producing action until the garlic mixes with the fluids of the intestinal tract. [25] Fresh garlic extract's enteric coating also prevents garlic breath. In contrast, aged garlic contains absolutely no allicin or allicin potential. This fact is probably responsible for the poor results noted in lowering cholesterol and blood pressure from aged garlic preparations. [26]

The most effective garlic supplements are made from fresh garlic, enterically coated, and provide a daily dose of at least 10 milligrams (mg) alliin or a total allicin potential of 4,000 micrograms (mcg). [25] Taking a once-daily garlic supplement that delivers 4,000 mcg of allicin will lower Jane's and Earl's high blood pressure and Earl's high cholesterol, naturally and effectively.

Q. What about fish oil supplements? I know they can prevent heart disease but I've also heard they contain harmful substances, too.
A. You're right on both counts. But, there are excellent fish oil supplements

Whole Heart Nutrition

Supplement	Low Risk	Moderate Risk	High Risk
Heart multivitamin	Every day	Every day	Every day
Garlic supplement 4,000 mcg allicin	1 tablet each day	1 tablet each day	1 tablet each day
Fish oil supplement with omega-3 fatty acids	600 mg each day	1200 mg each day	1800 mg each day
CoQ10	60 mg	100-200 mg each day	200-400 mg each day

Each additional risk factor requires additional supplements or increased doses for protection from heart disease.

naturally loaded with Omega-3 fatty acids, powerful nutrients that prevent heart disease, that are also certified free of harmful contaminants.

In the 1980s, researchers first began noticing the native Inuit (Eskimo) populations of Greenland and Alaska had hardly any heart disease despite a very high-fat diet. The deep-water fish that these peoples eat (and continue to eat to this day) are indeed quite fatty. But, this kind of fat, rich in Omega-3 fatty acids, actually protects the heart instead of harming it. [27,28]

Research has shown that the Omega-3 fatty acids in fish oil supplements can:

- Reduce the risk of arrhythmias, lethal heartbeat rhythms that cause sudden death. [29]
- Lower the levels of triglycerides, fats in the blood that can increase a person's risk of dying from a heart attack, even if a person's cholesterol levels are normal. [30,31]
- Slow atherosclerosis – the growth of harmful plaque on artery walls. Atherosclerosis develops over many years. If the plaque growth is slow and stable, chances are low that a heart attack will result. However, rapidly growing or unstable plaques can rupture. The body responds with inflammation,which causes blood clots to form. These blood clots block the artery and cause a heart attack. [31,32]
- Keep blood pressure levels low.[33] Many people have high blood pressure for years without knowing it. That's because it has no symptoms. Uncontrolled high blood pressure can lead to stroke, heart attack, heart failure, and kidney failure. While 25% of Americans have high blood pressure, nearly one-third of these people don't know they have it. This is why high blood pressure is often called the "silent killer." [3,4]

You can get all of this heart disease preventive protection from just 600-1800 mg of fish oil. It's pretty simple to see why Fred, Jane, Earl, and you and I need to take fish oil supplements every day.

However, it is absolutely critical that the fish oil supplement you take is free of contaminants and guaranteed fresh! Make sure that the manufacturer of the fish oil supplement you buy is able to provide documentation of purity in their product. Supplements should contain no detectable dioxin (a widely used toxic preservative), DDT (a toxic insecticide), PCBs (polychlorinated biphenyls) or heavy metals such as mercury and lead.

Before you buy any fish oil supplement, ask the clerk if you can open the bottle or jar and smell the contents. A fishy smelling fish oil supplement means it is rancid. Rancid fish oil is not going to help your heart at all and may actually hurt it.

Q. That leaves CoQ10. Why is it important for Jane and Earl?

A. CoQ10, also known as ubiquinone, is the premier heart supplement! CoQ10 is part of our energy producing system. It works directly in the mitochondria of each cell. Mitochondria are highly specialized structures within each cell and are often referred to as powerhouses. These tiny energy producers generate 95% of the energy the body requires. The number of mitochondria in a cell depends on its function and energy needs. The heart has very important functions and requires a vast amount of energy. Thus, the heart has a lot of mitochondria or little powerhouses.[34]

CoQ10 is incredibly crucial to the health of our hearts. Especially to hearts that are pumping blood with too much cholesterol.[35] But, in a dangerous paradox, CoQ10 levels can become dangerously depleted when physicians treat high cholesterol in their patients with certain medications. The so-called "statin" drugs (Mevacor®/lovastatin and Crestor®/rosuvastatin are two examples) are powerful medications prescribed to lower harmful cholesterol levels. However, one very harmful side effect they share is that they deprive cells of CoQ10. [36,37] While some physicians are aware of this serious side effect and tell their patients to take at least 400 mg of CoQ10 each day, most are not. The result? Any good the statin drugs may be doing is actually negated by their depletion of CoQ10.

Q. How does CoQ10 actually work? Has it been studied in heart disease?

A. Yes, it has! CoQ10 has been extensively studied in heart disease. This natural nutrient is present in every nucleated cell in our body (the only cells that don't contain CoQ10 are red blood cells). Heart cells, however, are absolutely loaded with CoQ10. Its job is fairly simply – CoQ10 is vital to the production of adenosine triphosphate (ATP), the compound our body uses for 95% of its energy needs.[38]

In 1998, 144 patients who had been admitted to the hospital after a heart attack, participated in a CoQ10 study. Half of the patients received 120 mg of CoQ10 a day in addition to the usual treatments given to heart attack patients. The other half, the control group, received the usual treatments and a placebo, but no CoQ10.

The results showed that the group taking CoQ10 had less irregular heartbeats, experienced less angina (a type of heart pain), and had much better function in the left ventricle (the most essential chamber of the heart), compared to the placebo group. Total deaths due to sudden heart failure or another heart attack were also reduced in the CoQ10 group. [39]

Q. What if I have already been diagnosed with Congestive Heart Failure? Will CoQ10 still help me?

A. CoQ10 has been proven in study after study to help slow down the destruction that occurs in congestive heart failure (CHF), a serious heart disease, and heal the heart muscles damaged by heart attacks. [40,43] In fact, heart attacks often occur when the body's CoQ10 levels are low. [35,38]

In a CHF study, patients received 100 mg of CoQ10 or a placebo twice daily for 12 weeks. Before and after the treatment period, the researchers introduced a catheter into the right ventricle of the patients' hearts to determine the degree of muscle damage CHF had caused. In the group who took CoQ10, the pumping ability of the heart improved significantly. The placebo group's hearts did not. The researchers conducting the study recommended that people with CHF add CoQ10 to the other medications they need to take to stay alive and well.[44]

Q. Are some types of CoQ10 better than others?

A. Indeed they are. CoQ10 products are ***not*** created equally. The key to this natural medicine is the quality of the manufacturing. Take a CoQ10 supplement that's been used in research conducted by prestigious universities (it will tell you this right on the label). Researchers want the best CoQ10 for their studies. You want the best CoQ10 for yourself and your loved ones.

The best CoQ10 has to meet the following criteria:

1. Must be easily absorbed during the digestion process so that it can get into the bloodstream.
1. Must reach the mitochondria in the cell.
2. Must be proven effective in studies.
3. Must be safe and free of impurities.

Q. It sounds as if CoQ10 is only for people with moderate or high risk factors. Can others benefit from this supplement?

A. Many people, including those like Fred with low risk factors or no risk of heart disease take CoQ10 every day. CoQ10 supplements may reduce your risk of cancer, prevent gum disease, and help certain nerve cells work more effectively.[38]

Conclusion

Understanding your personal risk factors, making better lifestyle choices, taking a multivitamin formulated for your heart, an enteric-coated fresh garlic supplement, fish oil supplement with Omega-3 fatty acids, and CoQ10 – the heart's super-nutrient - can help keep your heart healthy and strong.

Helen Keller, the famous lecturer and author, who was both blind and deaf wrote, "The best and most beautiful things in the world cannot be seen or even touched. They must be felt with the human heart."

Healthy hearts have the most opportunities to "feel" the best and are the most beautiful thing our world has to offer.

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